

STDs in Adolescents and Young Adults

Public Health Impact

Compared to older adults, adolescents (10- to 19-year-olds) and young adults (20- to 24-year-olds) are at higher risk for acquiring STDs for a number of reasons: they may be more likely to have multiple (sequential or concurrent) sexual partners rather than a single, long-term relationship; they may be more likely to engage in unprotected intercourse; and they may select partners at higher risk. In addition, for some STDs, for example *Chlamydia trachomatis*, adolescent women may have a physiologically increased susceptibility to infection due to increased cervical ectopy.

In addition, the higher prevalence of STDs among adolescents reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

Observations

- Numerous prevalence studies in various clinic populations have shown that sexually active adolescents have high rates of chlamydial infection.^{1,4} The Regional Infertility Prevention Programs that perform large scale screening for detecting chlamydial infections among women attending family planning clinics demonstrate that younger women consistently have higher positivity rates of chlamydia than older women, even as prevalence declines. An example is the Region X Chlamydia Project, which has screened women in family planning clinics since 1988 (Figure K).
- Among women, 15- to 19-year-olds had the highest rate of gonorrhea in 2000 compared to all other age categories (Figure Q). In addition, 20- to 29-year-old women had the highest rates of primary and secondary syphilis in 2000 (Figure S). Among men, 20- to 24-year-olds had the highest rate of gonorrhea and fourth highest rate of primary and secondary syphilis (Figures R and T).
- Rates of gonorrhea among male adolescents generally decreased between the years 1996 and 2000 (Figure R). In the 10- to 14-year-old group, the rate for young men remained stable at about 8 cases per 100,000 males between 1999 and 2000 (Table 20B). In the 15- to 19-year-old group, the rate declined from 373.6 cases per 100,000 males in 1996 to 327.9 cases per 100,000 males in 2000, a 12.2% decrease. Among young adult men in the 20- to 24-year-old group, the rate of gonorrhea increased between 1999 and 2000 (574.5 and 589.8 cases per 100,000 males respectively). The rate in this age group in 2000 is 10.7% higher than the rate of 532.7 cases per 100,000 males reported in 1996 (Table 20B).
- Gonorrhea among female adolescents and young adults aged 10- to 19-years also decreased between 1996 and 2000. In the 10- to 14-year-old group, the rate for females decreased 9.0% during this period from 58.6 cases per 100,000

females in 1996 to 53.3 cases per 100,000 females in 2000 (Table 20B). In the 15- to 19-year-old group, the rate declined slightly by 1.3% from 724.7 to 715.6 cases per 100,000 females between 1996 and 2000. In addition, the rates for female adolescents in these age groups decreased between the years 1999 and 2000. Among young adult women in the 20- to 24-year-old group, the rate of gonorrhea increased by 3.7% from 633.4 to 656.6 cases per 100,000 females between 1999 and 2000. The 2000 rate for women in this age group was 21.0% greater than the age-group specific rate of 542.7 cases per 100,000 females reported in 1996 (Table 20B).

- In 2000, the highest age-specific gonorrhea rates among women and the third highest rates among men were in the 15- to 19-year-old group (Figure 14).
- Since 1990, approximately 20,000 female National Job Training Program entrants have been screened each year for chlamydia. This program, administered by the U.S. Department of Labor at more than 100 sites throughout the country, is a job training program for economically disadvantaged youth aged 16 through 24 years. Among women entering the program from 30 states and Puerto Rico in 2000, based on their place of residence before program entry, the median state-specific chlamydia prevalence was 11.9% (range, 6.8% to 19.8%) (Figure L). Chlamydial infection is widespread geographically and highly prevalent among these economically disadvantaged young women.³
- Since 1996, approximately 25,000 female recruits have been screened at entry in the U.S. Army at basic training in Fort Jackson, South Carolina.⁴ All tests are performed at the Johns Hopkins University Chlamydia Research Laboratory on urine specimens. Among women aged 17 to 37 years entering the Army in 1999, based on their state of residence before entry, the overall state-specific chlamydia prevalence was 9.9%. State-specific prevalence ranged from 4.1% to 19.6% (Figure M). Data for female recruits in 2000 were unavailable.
- Among men aged 17 to 37 years entering the Army in 1999 and 2000, based on their state of residence before entry, the overall chlamydia prevalence was 4.7%. State-specific chlamydia prevalence ranged from 1.0% to 11.1% (Figure N).
- Data from National Job Training Program centers submitting gonorrhea specimens to the national contract laboratory from female students aged 16 to 24 years indicate a high prevalence of gonococcal infection in this population. Specimens from at least 100 students from each of 21 states and Puerto Rico, were tested by the contract laboratory; the median state-specific gonorrhea prevalence was 3.5% (range, 0.9% to 8.5%) in 2000 (Figure O).
- Among men aged 17 to 37 years entering the Army in 1999 and 2000, based on their state of residence before entry, the overall gonorrhea prevalence was 0.4%. State-specific gonorrhea prevalence ranged from 0.0% to 1.4% (Figure P).

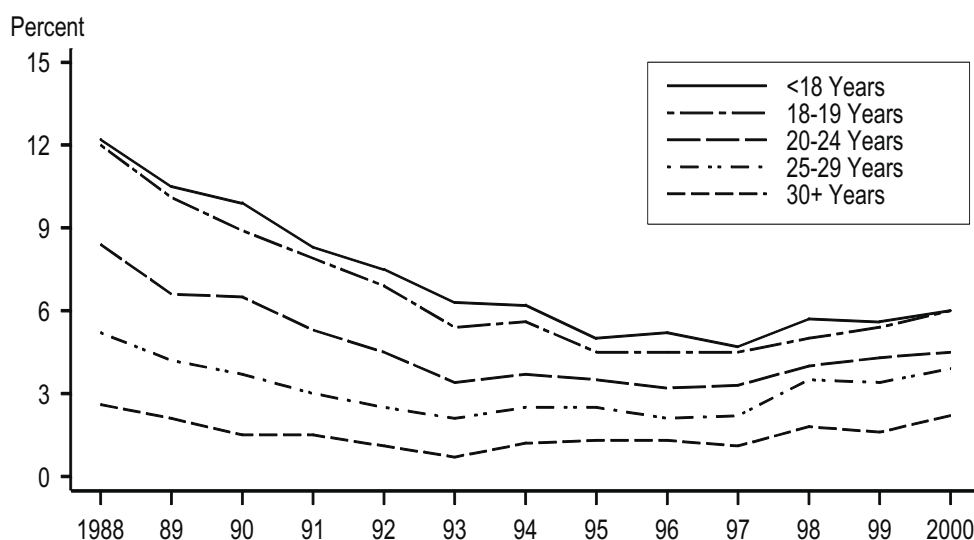
¹Centers for Disease Control and Prevention. Recommendations for the prevention and management of *Chlamydia trachomatis* infections, 1993. *MMWR* 1993;42(No. RR-12).

²Lossick J, Delisle S, Fine D, Mosure D, Lee V, Smith C. Regional program for widespread screening for *Chlamydia trachomatis* in family planning clinics. In: Bowie WR, Caldwell HD, Jones RP, et al., eds. *Chlamydial Infections: Proceedings of the Seventh International Symposium of Human Chlamydial Infections*, Cambridge, Cambridge University Press 1990, pp. 575-9.

³Mertz, KJ; Ransom RL; St. Louis ME, Groseclose SL; Hadgu A; Levine WC; Hayman C. Decline in the Prevalence of Genital Chlamydia Infection in Young Women Entering a National Job Training Program, 1990-1997. *Am J Pub Health* 2001;91(8):1287-1290.

⁴Gaydos CA, Howel MR, Pare B, et al. *Chlamydia trachomatis* infection in female military recruits. *N Engl J Med* 1998;339:739-44.

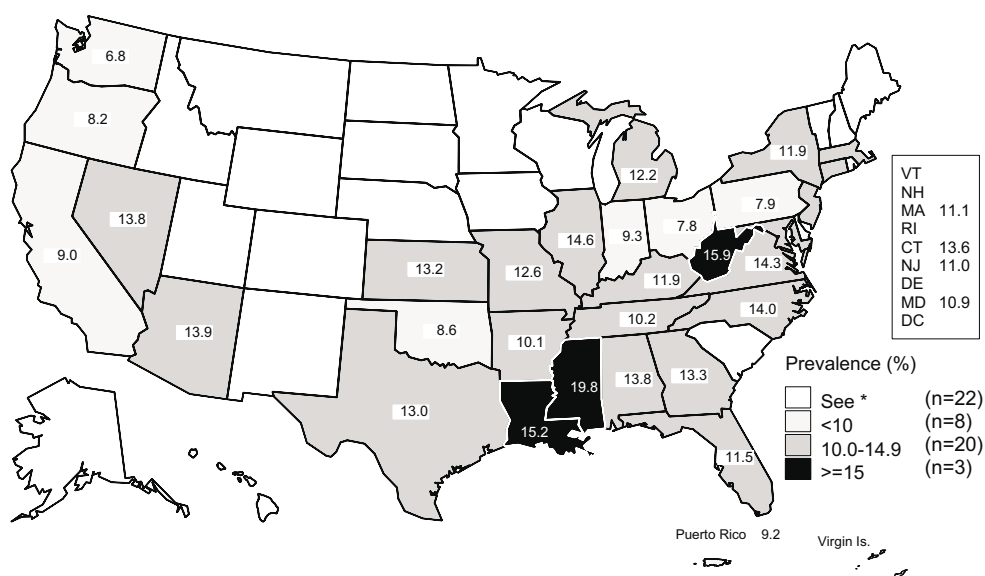
Figure K. Chlamydia — Positivity among women tested in family planning clinics by age group: Region X, 1988–2000



Note: Women who met screening criteria were tested. Trends not adjusted for changes in laboratory test method in 1994, 1999, and 2000 and associated increases in test sensitivity.

SOURCE: Regional Infertility Prevention Programs: Region X Chlamydia Project (Alaska, Idaho, Oregon and Washington)

Figure L. Chlamydia — Prevalence among 16-24 year-old women entering the National Job Training Program by state of residence, 2000

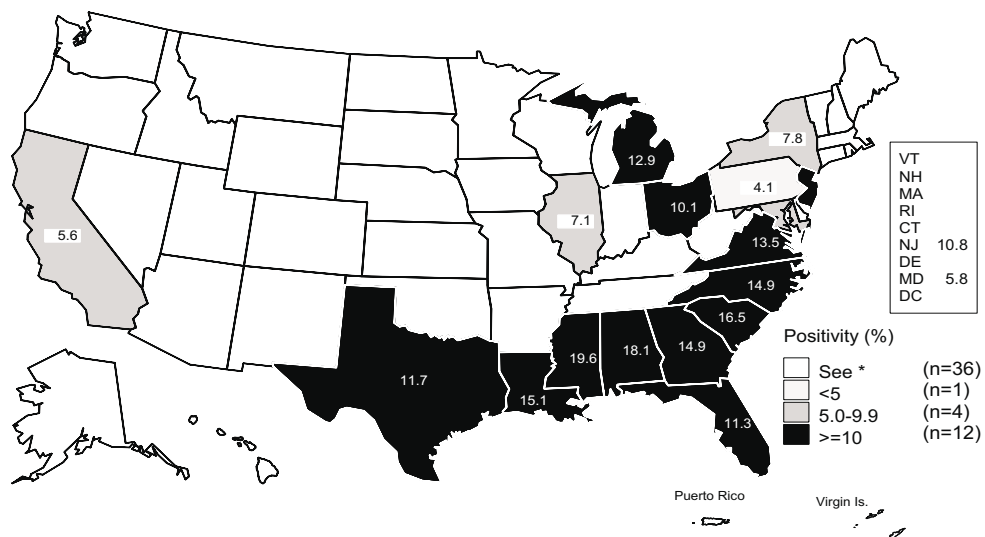


*Fewer than 100 women residing in these states and entering the National Job Training Program were screened for chlamydia in 2000.

Note: The overall chlamydia prevalence among female students entering the National Job Training Program in 2000 was 11.2%.

SOURCE: U.S. Department of Labor

Figure M. Chlamydia — Positivity among 17-37 year-old women entering the U.S. Army by state of residence, 1999

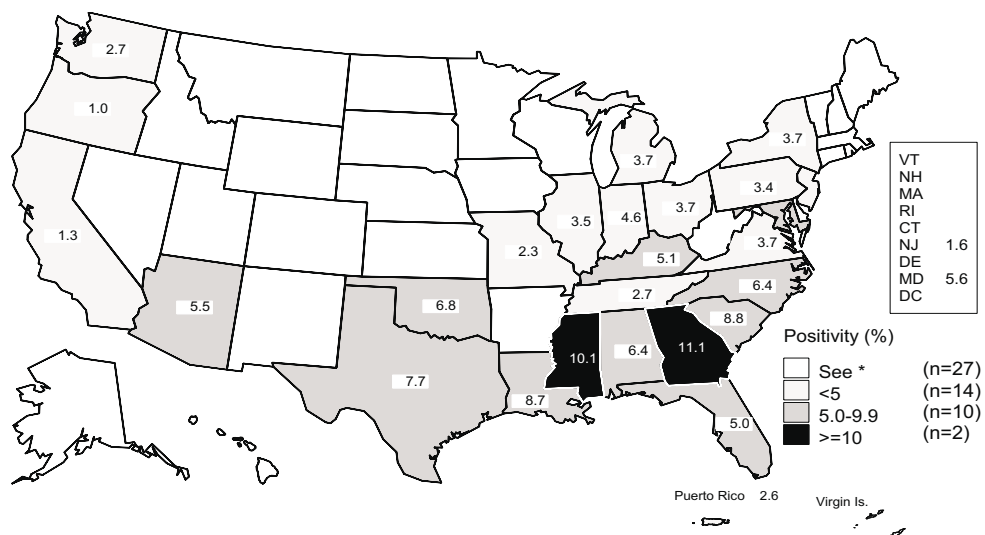


*Fewer than 100 women residing in these states and entering the U.S. Army were screened for chlamydia in 1999.

Note: Screening female recruits from January - July, 1999. Overall chlamydia positivity was 9.9%.

SOURCE: Johns Hopkins University Chlamydia Research Laboratory (funding initiative: Office of Defense Women's Health Research)

Figure N. Chlamydia — Positivity among 17-37 year-old men entering the U.S. Army by state of residence, 1999-2000

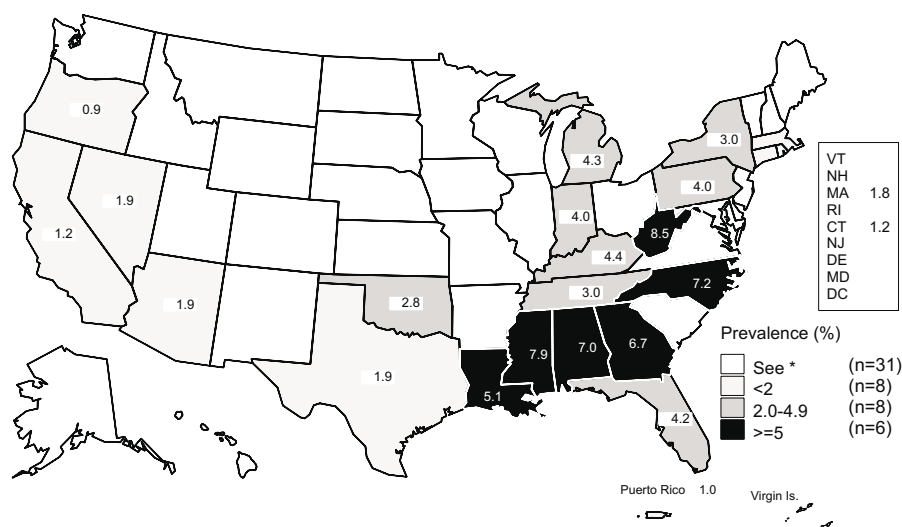


*Fewer than 100 men residing in these states and entering the U.S. Army were screened.

Note: Screening male recruits from January - February 1999 and August 1999 - June 2000. Overall chlamydia positivity was 4.7%.

SOURCE: Johns Hopkins University Chlamydia Research Laboratory (funding initiative: Aberdeen Proving Ground)

Figure O. Gonorrhea — Prevalence among 16-24 year-old women entering the National Job Training Program by state of residence, 2000

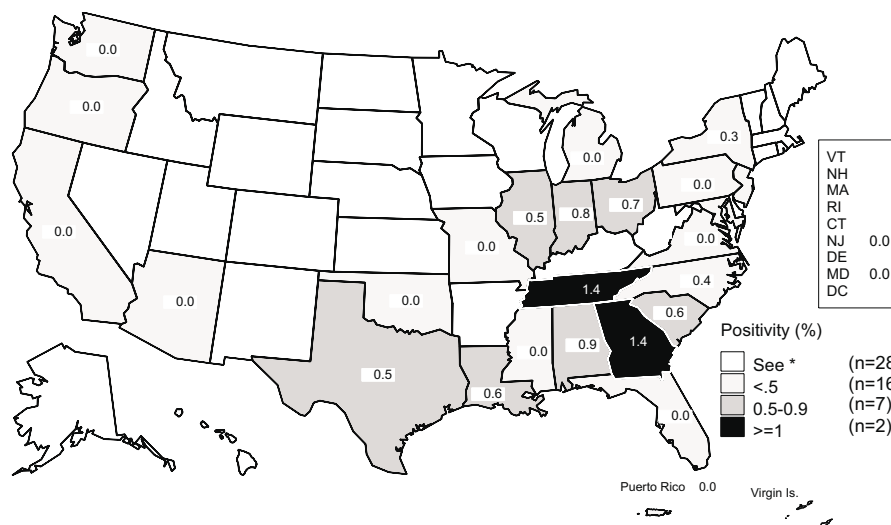


*Fewer than 100 women residing in these states and entering the National Job Training Program were screened for gonorrhea by the national contract laboratory in 2000.

Note: Many training centers test female students for gonorrhea using local laboratories; these results are not available to CDC. For this map, gonorrhea test results for students at centers submitting specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted. The overall gonorrhea prevalence among female students entering the National Job Training Program in 2000 was 3.3%.

SOURCE: U.S. Department of Labor

Figure P. Gonorrhea — Positivity among 17-37 year-old men entering the U.S. Army by state of residence, 1999-2000



*Fewer than 100 men residing in these states and entering the U.S. Army were screened.

Note: Screening male recruits from January - February 1999 and August 1999 - June 2000. Overall gonorrhea positivity was 0.4%.

SOURCE: Johns Hopkins University Chlamydia Research Laboratory (funding initiative: Aberdeen Proving Ground)

Figure Q. Gonorrhea — Age-specific rates among women 10-44 years of age: United States, 1981–2000

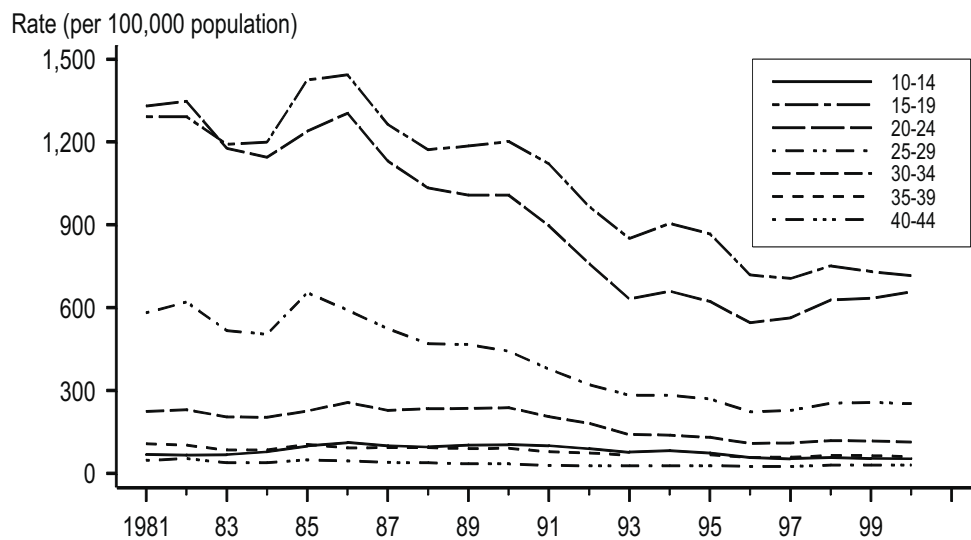


Figure R. Gonorrhea — Age-specific rates among men 10-44 years of age: United States, 1981–2000

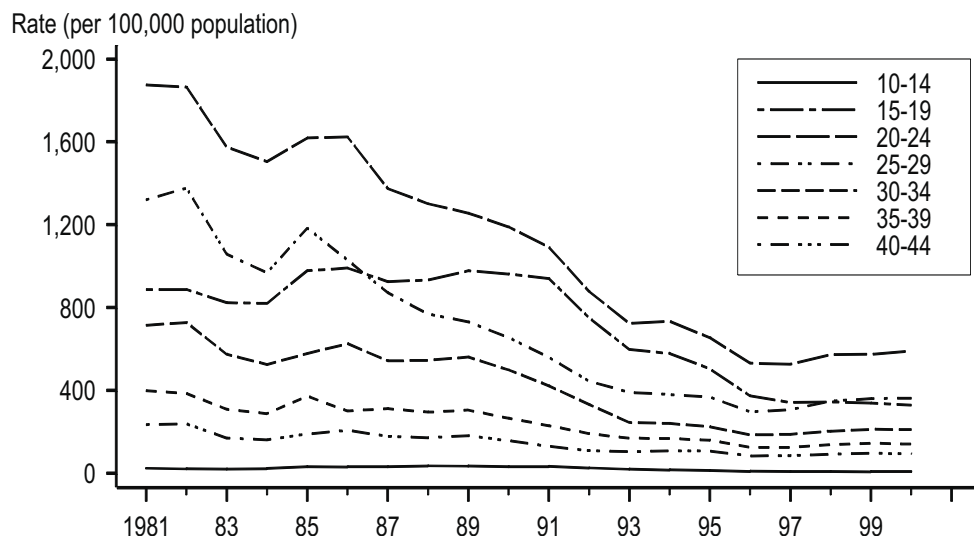


Figure S. Primary and secondary syphilis — Age-specific rates among women 10-44 years of age: United States, 1981–2000

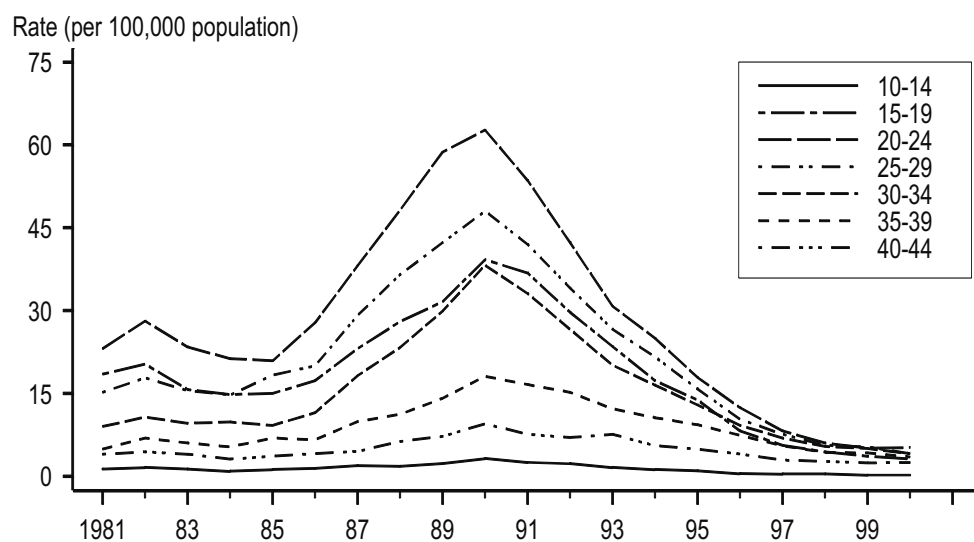


Figure T. Primary and secondary syphilis — Age-specific rates among men 10-44 years of age: United States, 1981–2000

